unskilfully removed, for this is one of the worst-performed operations in surgery.

As Dr. Taylor rightly says, allergic asthma as well as local disease in the lungs has to be excluded, and his emphasis on the need to remedy faulty breathing is also welcome, but his paper does not sufficiently emphasize that treatment depends on accurate diagnosis. It is true that a change of climate may check the sequence of repeated respiratory infections, but most of these children need to be helped without taking them from their homes, and we should first discover what is the matter with them. Clinical and social medicine should here co-operate in diagnosis and treatment, which implies team work between physician, radiologist, nose-and-throat surgeon, physiotherapist, and health visitor.—I am, etc.,

London, W.1. REGINALD LIGHTWOOD.

SIR,—I have read this article by Dr. Brian Taylor (*Journal*, April 1, p. 453) with great interest, but would beg to disagree with some of his statements: first, that when "recurrent colds and upper respiratory catarrhs were followed by generalized pulmonary effects—coughing, tight chest, wheeziness, and more or less 'asthma'"—they have no true allergic basis; secondly, that "textbooks and the like do not appear to recognize this common and troublesome condition"; and, thirdly, that "skin-testing may show sensitivity to proteins, but these are usually so varied as to make the knowledge of little value."

In many discussions and writings on asthma in childhood (e.g., Garrod, Batten, Thursfield, and Paterson, *Diseases of Children*, 1934, 3rd edition) I have described this "lung damage type," classifying it as such in order to stress the role of upper and lower respiratory infections and the pulmonary complications of the infectious fevers in childhood in the precipitation of the initial wheezy attack, and the part of each subsequent infection in causing a recurrence of the cough, tightness, or wheeziness. A vicious circle seems to be present: the body appears to have very little resistance to even low-grade infections, and if the mucous membranes are constantly irritated by some air-borne allergen an oedematous state is maintained to produce a more fertile field for the growth of any roving bacteria. On the germs taking up their residence the catarrhal symptoms increase, the child is put to bed, propped up with ample pillows, kept in an under-ventilated and over-heated room, and its digestion overtaxed with milk, sops, and cereals. Obviously the difficult breathing that ensues is an allergic manifestation, and surely the knowledge of skin tests which showed a sensitivity to certain proteins—usually feathers, down, horsehair, dust, milk, or cereals—is now of great value in therapeusis. During the infection the body's general resistance is lowered, and the available protective adrenaline production is reduced or used up more quickly; contact with the irritant bedding is increased from 10 hours to 24 hours a day; the dust content of the room is increased by rendering ventilation inadequate in attempts to avoid draughts; the temperature of the room is increased so that the natural evaporation of moisture from the mucous membranes is impeded and their swelling and clogging augmented. In fact, the child is saturated to excess with various potent allergens when resistance is at its lowest ebb.

The deleterious effect of air-raid shelters on these children is the result of adrenaline exhaustion consequent on prolonged fear; greater liability to infection from chilling, overcrowding, and the lack of ventilation and the disinfectant action of any sun's rays; and the greater concentration of allergens—dusts, moulds, eiderdowns, pillows, rugs, and even animals in a very confined space.

Surely the tightness of the chest, cough, or wheeziness in such cases is just as much allergic in origin as the aggravation of an infantile eczema by administering egg-white or fish? If the usual irritants are avoided in these cases of "chronic pulmonary catarrh" constantly—the bedding freed from all feathers, down, horsehair, and dusty substances; the bedroom maintained with a minimum of ledges, curtains, carpets, or other dust-holding surfaces; and the forcing of large quantities of milk and cereal foods is forbidden, especially during infections—the agreed very beneficial effects of changes of climate, breathing exercises, and general hygiene can be greatly augmented and any neuropathic tendency discountenanced.

Dr. Taylor seems to suggest that the criteria of a true allergic asthma are the previous occurrence of infantile eczema, a direct relation between the attacks and foreign proteins, freedom from respiratory symptoms and signs between attacks, and a greater frequency of symptoms in the summer months. In my experience only one child asthmatic in three has had infantile eczema; as severe asthmatic attacks can be produced by aspirin as by any foreign protein; the majority of asthmatics have a blocked or runny nose even between attacks; and with the exception of pollen-sensitive cases most asthmatics are worse in the winter.

Finally, most of the cases described will respond to adrenaline if, first, it is adequately given—small doses being frequently repeated at short intervals and the injections continued for hours after the apparent lessening of the spasm—and, secondly, the sensitizing substances have also been thoroughly removed—the irritant bedding changed and over-alimentation avoided, however "valueless" the skin reactions may have appeared in the free interval.—I am, etc.,

London, W.1. GEORGE BRAY.

Pregnancy and Pulmonary Tuberculosis

SIR,—There appears to be something connected with the mysteries of childbirth in the tuberculous woman which, according to Dr. Logg (April 1, p. 468) and Dr. McDade (Jan. 15, p. 97), renders one particularly liable to censure by presenting conclusions which conflict with prevailing opinion. It appears that I have even gone so far as to formulate conclusions contrary to those reached by a B.M.A. conference which sat at Oxford in 1936. May I, through your columns, respectfully remind these gentlemen that we are members of a scientific profession, and deductions based on research should not be influenced by the opinion of others, however eminent the individual or august the gathering. The Black Notley cases have all been treated by myself, or under my supervision, and I maintain that, based on these, my conclusions are logical ones and are definitely not precluded by Dr. Logg's rather dogmatic statements, for which he produces no evidence other than expressions of opinion.

Dr. Logg states that my deductions are not supported by "latest work elsewhere," but he gives no references. I do not know of any comparable recent work, but Jameson at Saranac Lake Sanatorium (*Gynecological and Obstetrical Tuberculosis*, Montreal, 1935, p. 134) reported similar good results in 1935. I am not familiar with the facilities in London for the care of pregnant tuberculous women, but so far as I am aware Black Notley is the only sanatorium in this country which provides the special facilities described in my paper. In this respect at least Dr. Logg must grant London's inferiority to Essex. With reference to Dr. Logg's six "prominent facts," I would like to say:

1. While it is true that some tuberculous women date their illness from a confinement, the number of similar cases in which this cannot be shown must be vastly greater. (I have no figures—neither, apparently, has Dr. Logg.)

2. I have not claimed that pregnancy is likely to benefit the lungs of a tuberculous woman, but I am not alone in noting the improvement that does sometimes occur, and we must remember that many factors in the immunology of tuberculosis are still not yet understood. It may be that, as suggested by my colleague Dr. M. C. Wilkinson, the endocrinal changes which take place in pregnancy have an influence on tuberculosis.

3. Seventy out of 75 quiescent and arrested cases passing through pregnancy and labour without harm is more than a "proportion," and even Dr. Logg must admit this is a significant figure.

4. The usual length of stay after confinement at Black Notley is, for quiescent cases, 1 month under wartime conditions, but was previously 3 months. "Active" cases are retained as long as necessary for treatment. The number of the latter cases was admittedly small (25), but all were under careful observation for periods varying from 2 months to 3 years, and the fact that 18 of them were ultimately discharged either quiescent (8), improved (4), or unchanged (6), does not support Dr. Logg's assertion that "the large majority of active cases tend to deteriorate appreciably during pregnancy or within a few weeks of labour."

5. Combined obstetrical and tuberculosis treatment is precisely what is provided at Black Notley.

6. Reference to my paper (*Journal*, Dec. 18, 1943) will show that I agree with Dr. Logg in that therapeutic abortion is indicated in some cases, and possibly more frequently so when the facilities I